



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS, TX 75202-2733

November 25, 2013

Dwayne Johnson
Regulatory Branch, CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Mr. Johnson:

The Environmental Protection Agency (EPA) Region 6 has reviewed Public Notice (PN) SWG-2013-00147, dated October 29, 2013. The applicant, Freeport LNG, L.P., is proposing to construct and operate natural gas liquefaction facilities (Liquefaction Plant) at, and adjacent to, its existing Quintana Island Terminal to convert domestically produced pipeline natural gas into liquefied natural gas (LNG) for export under the Liquefaction Project. In addition, Freeport LNG proposes to build a third LNG storage tank, a second LNG berthing dock, and LNG transfer pipelines at the Terminal to support the export operation and enhance current operations under the Phase II and Phase II Modification Projects. Beyond Quintana Island, Freeport LNG proposes to construct and operate natural gas pretreatment facilities (Pretreatment Plant) and construct a network of underground pipelines and utility lines (Pipeline/Utility Line System). The proposed pipelines would carry natural gas (including boil-off gas), nitrogen, and natural gas liquids, whereas the utility lines would consist of an underground water line and a fiber optic cable system, along with overhead electric transmission lines.

The Project is located in or close to the City of Freeport, in Brazoria County, Texas. The Liquefaction Plant and Phase II Developments are located at, and adjacent to, Freeport LNG's existing Quintana Island Terminal (Terminal). The Pretreatment Facility is located approximately 2.5 miles north of the Terminal near the City of Oyster Creek, north of Highway 332 and east of County Road (CR) 690. The Pipeline/Utility Line System is located between the Liquefaction Plant, Pretreatment Plant, Freeport LNG's existing Stratton Ridge underground storage facility adjacent to Farm-to-Market (FM) 523, and other receipt and delivery points in the area.

According to the PN, Corps Section 404/10 authorization for the original Phase II Project was granted on 31 July 2008 under Department of the Army (DA) Permit No. SWG-2003-02110, which is Amendment No. 5 of the permit that was originally issued for the Phase I Project (DA Permit No. 23078) on 30 December 2004. However, the only Phase II facilities constructed to date are at the Stratton Ridge underground storage site, which became operational in late 2011. To simplify the current permitting process, accommodate the proposed Phase II facility design modifications, and offer a new compensatory mitigation plan that addresses all the proposed

developments, Freeport LNG is seeking authorization under one new individual permit for all three projects (Liquefaction, Phase II, and Phase II Modification).

The PN also states that the jurisdictional status of wetlands and waterbodies at the Quintana Island Terminal site was determined by the Corps during permitting of the Phase I Project (existing terminal facilities) and the originally designed Phase II Project. The Phase I Project was completed and became operational in 2008; the Phase II Project as originally designed received a Corps permit on 31 July 2008 but was not constructed. The only site changes that have taken place since that time have been associated with construction of the Phase I facilities and the associated restoration/creation of wetlands under the Phase I mitigation plan.

The PN explains that all of the wetlands and waterbodies that will be impacted by the Liquefaction Project or the currently proposed Phase II developments at the Terminal site lie within the scope of the previous jurisdictional determinations and/or permit plans. Likewise, the jurisdictional status of wetlands and waterbodies that will be impacted on the Pipeline/Utility Line System was initially determined during permitting for other Freeport LNG projects, including the Phase I send-out pipeline (which became operational in 2008) and the Angler NGL Pipeline (which was permitted in 2010 but was not constructed). The jurisdictional status of waterbodies and wetlands at the Pretreatment Plant site was determined by the Corps on 9 August 2012, specifically for the Liquefaction Project.

In total, the Liquefaction Project, Phase II Project, and Phase II Modification Project will have the following impacts on waters of the U.S.: 37.35 acres of temporary impacts on waterbodies; 2.87 acres of permanent impacts on waterbodies, 25.65 acres of temporary impacts on wetlands, 19.63 acres of permanent impacts on wetlands, 60,000 cu yd of onshore excavation and permanent material removal, and 1,333,000 cu yd of dredging. As such, the acreage effects of the Liquefaction Project, Phase II Project, and Phase II Modification Project on waters of the U.S. will be 63.00 acres of temporary impacts and 22.50 acres of permanent impacts, or 85.50 acres overall.

According to the PN, Freeport LNG has incorporated avoidance and minimization of wetland and waterbody impacts into initial facility design and the development of construction procedures. The Liquefaction Plant avoids wetland and waterbody impacts completely, with the footprint occupying a former dredged material placement area (DMPA); the Pretreatment Plant footprint has been configured and positioned within Freeport LNG's site property to minimize such impacts; and the design of the Pipeline/Utility Line System avoids and minimizes such impacts by the use of horizontal directional drilling (HDD) to cross major waterbodies and wetlands and, to the extent possible, collocation of multiple pipelines/utility lines within a shared construction right-of-way along the Terminal's existing send-out pipeline route. The applicant states that during construction and site restoration, Freeport LNG will adhere to the impact avoidance and minimization measures embodied in its "Upland Erosion Control, Revegetation and Maintenance Plan", "Wetland and Waterbody Construction and Mitigation Procedures", and any corresponding permit requirements.

As described in the PN, Freeport LNG proposes to mitigate for unavoidable wetland impacts through permittee-responsible mitigation. The proposed mitigation includes the creation of on-

site wetlands along the GIWW at the Terminal site, and preservation of off-site wetlands approximately 2.8 miles north of the proposed Pretreatment Plant site. These proposed mitigation measures are detailed in Freeport LNG's Compensatory Wetland Mitigation Plan.

The following comments are being provided for use in reaching a decision relative to compliance with the EPA's 404(b)(1) *Guidelines for the Specification of Disposal Sites for Dredged or Fill Material* (40 CFR Part 230).

Were all reasonable alternatives considered in the development and selection of the proposed pipeline routing? Based on review of aerial photography, there appear to be other potential alternative alignments, such as along existing roadways, that would impact wetlands less than the preferred alternative.

Were all reasonable alternatives to the proposed location of the Pretreatment Plant considered? Based on aerial photography, it appears there may be other tracts of land in the area that may consist of less wetlands than the proposed tract.

Were all reasonable alternatives to the proposed dredged material disposal considered? Was Beneficial Use, such as marsh creation (beyond the minimum required for mitigation), considered?

Have the sediments proposed to be dredged been evaluated as described in the Inland Testing Manual or Upland Testing Manual? Sediments to be disposed of in open water or via Beneficial Use should be evaluated using the Inland Testing Manual. Sediments proposed for disposal in Upland Confined Disposal Facilities should be evaluated using the Upland Testing Manual. We request that the USACE forward any sediment contaminant data used to evaluate the suitability of sediment proposed to be dredged, to be disposed of in the manner proposed.

We recommend the applicant establish appropriate target elevations for all proposed created marshes, by surveying the elevation of nearby existing healthy marshes of similar vegetative composition/type. In addition, we recommend the applicant "gap" any containment used in marsh creation, after construction and after sediment consolidate sufficiently to do so. We recommend the applicant maximize the connectivity of any created marsh with the surrounding water, while also taking into account the potential need for protection of the marsh from ship wakes or other disturbances. We recommend vegetative transplants be obtained from commercial nurseries rather than from natural marshes.

Is the USACE confident in the wetland jurisdictional determination (JD) done for the proposed location of the Pretreatment Plant? National Wetland Inventory maps show much of this entire tract as being wetland, mostly palustrine emergent persistent temporary flooded (PEM1A), but also some semipermanently flooded (PEM1F) and seasonally-flooded (PEM1C), while your JD apparently identified much less of the tract as wetland (Figure B, Plans). The difference may be that your JD may not have included the temporary flooded (PEM1A) class mapped by NWI at the site. We strongly recommend that EPA and USACE jointly review your JD prior to you issuing the permit.

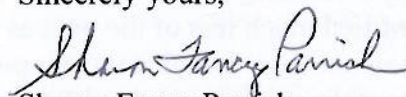
EPA does not support the applicant's proposed mitigation, which is to preserve some nearby marsh. First, EPA does not generally support wetland mitigation based on preservation, since there is a net loss of wetland area and function in such transactions. Second, the applicant has not argued that the wetlands proposed for preservation are threatened. Finally, the wetlands proposed by the applicant for preservation do not appear to be the same as those that will be destroyed by the proposed project. While the latter appear to be primarily palustrine emergent persistent semipermanently flooded (PEM1F), based on the USACE JD (Figure B), or temporary flooded (PEM1A) based on NWI maps of the site, the wetlands proposed for preservation appear to be intermittently flooded (PEM1J). Not only is this potentially inconsistent with EPA's preference that wetland impacts be mitigated in-kind, but this raises important questions regarding the USACE's JD for the proposed Pretreatment Plant site. If the temporary flooded wetlands (PEM1A) at the proposed Pretreatment Plant site were not considered jurisdictional by the USACE, how can the USACE accept preservation of the even less frequently/persistently flooded wetlands (PEM1J) proposed by the applicant for mitigation, as mitigation for the loss of even more frequently/persistently flooded wetlands proposed to be destroyed by the project (PEM1F, PEM1C)? If infrequently flooded wetlands (PEM1J) are deemed sufficiently worth preserving to warrant official acceptance as compensation for destroying more frequently/persistently flooded wetlands (PEM1C, PEM1F), then why don't wetlands with an intermediate frequency/duration of flooding (PEM1A) warrant protection (or even acknowledgement as wetlands) from permitted filling?

In summary, EPA recommends that no permit be issued for the proposed project until:

- Possible inconsistencies between the JD and NWI maps of the Pretreatment Plant site are resolved
- Dredged material proposed for disposal is properly evaluated according to the applicable testing manual (Inland Testing Manual, Upland Testing Manual) and the results are provided to EPA for review.
- The applicant demonstrates that alternative pipeline routes with fewer wetland impacts were considered.
- The applicant demonstrates that alternative sites for the Pretreatment Plant with fewer wetland impacts were considered.
- The applicant evaluates mitigation alternatives other than preservation.
- The applicant considers Beneficial Use of dredged material, if it is found to be "suitable" and "free of contaminants".

If you have any questions on these comments, please contact Ken Teague of my staff at 214-665-6687.

Sincerely yours,



Sharon Fancy Parrish
Chief
Wetlands Section

cc: Mike Morgan, TPWD
Heather Young, NOAA Fisheries
Edith Erfling, USFWS
Lili Murphy, TCEQ

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Hudson County, N.J.
April 1, 1917
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